



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/359,648	07/26/1999	KIRK K. CHANG	2925-253P	3108

30594 7590 10/03/2003

HARNESS, DICKEY & PIERCE, P.L.C.
P.O. BOX 8910
RESTON, VA 20195

EXAMINER

CUMMING, WILLIAM D

ART UNIT	PAPER NUMBER
----------	--------------

2683

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/359,648

Applicant(s)

CHANG ET AL.

Examiner

WILLIAM D. CUMMING

Art Unit

2683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3 and 5-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-19 is/are allowed.
- 6) ☒ Claim(s) 1,3,5-14 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 18.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114 was filed in this application after appeal to the Board of Patent Appeals and Interferences, but prior to a decision on the appeal. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on May 6, 2003 and August 15, 2003 has been entered.

Specification

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

The term "*frequentist likelihood function.*"

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1, 3, 6, 7, 9, 10, 11, 12, 13, 14, and 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification fails to originally support and inadequately describe the now claimed frequentist likelihood function as stated in claims 1 and 20.

5. Claim 20 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification does not provide an enabling disclosure for the software for calculating since the software is not disclose and known only to the inventors as stated by claim 20. In computer applications, it is not unusual for the claimed invention to involve two areas of prior art or more than one technology, e.g., an appropriately programmed computer and an area of application of said computer. *White Consol. Indus.*, 214 USPQ at 821. In regard to the "skilled in the art" standard, in cases involving both the art of computer programming, and another technology, the examiner must recognize that the knowledge of persons skilled in both technologies is the appropriate criteria for determining sufficiency. See *In re Naquin*, 398 F.2d 863, 158 USPQ 317 (CCPA 1968); *In re Brown*, 477 F.2d 946,

177 USPQ 691 (CCPA 1973); and *White Consol. Indus. v. Vega Servo-Control, Inc.*, 214 USPQ 796, 822 (S.D.Mich. 1982), *aff'd on related grounds*, 713 F.2d 788, 218 USPQ 961 (Fed. Cir. 1983). In a typical computer application, system components are often represented in a "*block diagram*" format, i.e., a group of hollow rectangles representing the elements of the system, functionally labeled, and interconnected by lines. Such block diagram computer cases may be categorized into (A) systems which include but are more comprehensive than a computer and (B) systems wherein the block elements are totally within the confines of a computer.

The first category of such block diagram cases involves systems which include a computer as well as other system hardware and/or software components. In order to meet his or her burden of establishing a reasonable basis for questioning the adequacy of such disclosure, the examiner should initiate a factual analysis of the system by focusing on each of the individual block element components. More specifically, such an inquiry should focus on the diverse functions attributed to each block element as well as the teachings in the specification as to how such a component could be implemented. Based on such an analysis, the examiner has reasonably contend that more than routine experimentation would be required by one of ordinary skill in the art to implement such a component or components, that component or components is specifically be challenged by the examiner as part of this 35 U.S.C. 112, first paragraph rejection. Additionally, the examiner has determine whether certain of the

hardware or software components depicted as block elements are themselves complex assemblages which have widely differing characteristics and which must be precisely coordinated with other complex assemblages. Under such circumstances, a reasonable basis does exist for challenging such a functional block diagram form of disclosure. See *In re Ghiron*, 442 F.2d 985, 169 USPQ 723 (CCPA 1971) and *In re Brown, supra*. Moreover, even if the applicants has cited prior art patents or publications to demonstrate that particular block diagram hardware or software components are old, it should not always be considered as self-evident how such components are to be interconnected to function in a disclosed complex manner. See *In re Scarbrough*, 500 F.2d 560, 566, 182 USPQ 298, 301 (CCPA 1974) and *In re Forman*, 463 F.2d 1125, 1129, 175 USPQ 12, 16 (CCPA 1972). Furthermore, in complex systems including a digital computer, a microprocessor, or a complex control unit as one of many block diagram elements, timing between various system elements may be of the essence and without a timing chart relating the timed sequences for each element, an unreasonable amount of work may be required to come up with the detailed relationships an applicant alleges that he or she has solved. See *In re Scarbrough*, 500 F.2d at 566, 182 USPQ at 302. For example, in a block diagram disclosure of a complex claimed system which includes a microprocessor and other system components controlled by the microprocessor, a mere reference to a prior art, commercially available microprocessor, without any description of the precise operations to be performed by the microprocessor,

fails to disclose how such a microprocessor would be properly programmed to either perform any required calculations or to coordinate the other system components in the proper timed sequence to perform the functions disclosed and claimed. If, in such a system, a particular program is disclosed, such a program should be carefully reviewed to ensure that its scope is commensurate with the scope of the functions attributed to such a program in the claims. See *In re Brown*, 477 F.2d at 951, 177 USPQ at 695. Since, the disclosure fails to disclose any program and more than routine experimentation would be required of one skilled in the art to generate such a program, the examiner clearly has a reasonable basis for challenging the sufficiency of such a disclosure.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

7. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

8. Claims 8 is rejected under 35 U.S.C. 102(e) as being anticipated by **Chang, et al (United States Patent 6,564,065)**

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Chang, et al disclose a method of predicting the location of a CDMA mobile communication unit (figure1, #20) comprising the steps of receiving measure attribute information for a mobile unit (#20) in the service area (#10). Computing the probability of the mobile unit (#20) being at a specific location (#x,y) in the service area (#10) and generating an output indicative of the likelihood of the mobile unit (#10).

Response to Amendment

9. The declaration filed on August 15, 2003 under 37 CFR 1.131 is sufficient to overcome the **Chang, et al** (United States Patent 6,263,208) reference.

10. AMENDMENTS NOW MUST BE SUBMITTED IN REVISED FORMAT

All amendments received by the Office on or after July 30, 2003 **must** be in compliance with the rules as required by the Revised Amendment Practice. This practice requires the submission of an amendment document that includes separate sections for amendments to the claims, drawings, specification and abstract, each beginning on a new sheet of paper. If an amendment is received as a preliminary amendment or as a *bona fide* reply under 37 CFR 1.111, that has compliant amendments to one or more separate section(s), but also includes one, or more, separate section(s) with non-compliant amendments, the Office will mail a Notice of Non-Compliant Amendment requiring correction to the non-compliant section(s) within a time period set by the Office. When making corrections, applicant should just resubmit the needed corrected section(s), and correspondingly, should not resubmit the entire amendment document. For example, if the amendment included compliant amendments to the specification and claims, and non-compliant amendments to the drawings, a notice requiring resubmission of compliant amendments to the drawings would be sent. In reply to the notice, applicant should only submit a compliant amendment to the drawings, and not the previously compliant amendments to the specification and claims. If any additional, or further, amendments to the claims are desired, the changes must be made relative to the previous compliant amendment to the claims. The Office will consider both the previous compliant amendment to the claims, and the supplemental compliant amendment to the claims, after the Office receives the compliant amendment to the drawings.

An amendment submitted on or after July 30, 2003 as part of a reply after the close of prosecution (e.g., as a reply under 37 CFR 1.116) that is not compliant with the Revised Amendment Practice will not act to toll the outstanding time period. See 37 CFR 1.135(c). A notice (e.g., an advisory action) may be mailed by the Office specifying which section(s) of the amendment was not in compliance with the Revised Amendment Practice, but no new time period will be given to provide a compliant section.

REVISED FORMAT OF AMENDMENTS

Begin on separate sheets:

Each section of an Amendment (e.g., Claim Amendments, Specification Amendments, Remarks) should begin on a separate sheet. *For example*, in an amendment containing a.) introductory comments, b.) amendments to the claims, c.) amendments to the specification, and d.) remarks, each of these sections should begin on a separate sheet. This will facilitate the process of separately indexing and scanning of each part of an amendment document for placement in an electronic file wrapper.

Two versions of amended part(s) no longer required:

The current requirement in 37 CFR 1.121(b) and (c) to provide two versions (a clean version and a marked up version) of each replacement paragraph, section, substitute specification or claim will be waived where an amendment is submitted in the following format:

A) Amendments to the claims:

Each amendment document that includes a change to an existing claim, or submission of a new claim, **must include a complete listing** of all claims in the application. After each claim number, the status must be indicated in a parenthetical expression, and the text of each claim under examination (with markings to show current changes) must be presented. The listing will serve to replace all prior versions of the claims in the application.

(1) The current status of all of the claims in the application, including any previously canceled or withdrawn claims, must be given. Status is indicated in a parenthetical expression following the claim number by one of the following: (original), (currently amended), (previously amended), (canceled), (withdrawn), (new), (previously added), (reinstated – formerly claim #_), (previously reinstated), (re-presented – formerly dependent claim #_), or (previously re-presented). The text of all pending claims under examination must be submitted each time any claim is amended. Canceled and withdrawn claims should be indicated by only the claim number and status.

- (2) All claims being currently amended must be presented with markings to indicate the changes that have been made relative to the immediate prior version. The changes in any amended claim should be shown by strikethrough (for deleted matter) or underlining (for added matter). An accompanying clean version is not required and should not be presented. Only claims of the status "currently amended" will include markings.
- (3) The text of pending claims not being amended must be presented in clean version, i.e., without any markings. Any claim presented in clean version will constitute an assertion that it has not been changed relative to the immediate prior version.
- (4) A claim may be canceled by merely providing an instruction to cancel. Listing a claim as canceled will constitute an instruction to cancel. Any claims added by amendment must be indicated as (new) and shall not be underlined.
- (5) All of the claims in each amendment paper must be presented in ascending numerical order. Consecutive canceled or withdrawn claims may be aggregated into one statement (e.g. Claims 1 – 5 (canceled)).

Example of listing of claims:

Claims 1-5 (canceled)

Claim 6 (withdrawn)

Claim 7 (previously amended): A bucket with a handle.

Claim 8 (currently amended): A bucket with a ~~green~~ blue handle.

Claim 9 (withdrawn)

Claim 10 (original): The bucket of claim 8 with a wooden handle.

Claim 11 (canceled)

Claim 12 (new): A bucket with plastic sides and bottom.

Claim 13 (previously added): A bucket having a circumferential upper lip.

Claim 14 (re-presented -- formerly claim 11): A black bucket with a wooden handle.

B) Amendments to the specification:

Amendments to the specification may be made by presenting a replacement paragraph, section or substitute specification marked up to show changes made relative to the immediate prior version. An accompanying clean version is not required and should not be presented.

C) Amendments to drawing figures:

Drawing changes may be made by presenting replacement figures which incorporate the proposed changes and which comply with § 1.84. An explanation of the changes made must be presented in the remarks section of the amendment. If the changes to the drawing figure(s) are not approved by the examiner, applicant will be informed in the next Office action. Any replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even though only one figure may be amended. The figure or figure number of the amended drawing should not be labeled as "amended."

Any questions regarding the submission of amendments pursuant to the revised practice set forth in this flyer should be directed to the following legal advisors in the Office of Patent Legal Administration (OPLA): Elizabeth Dougherty (Elizabeth.Dougherty@uspto.gov), Gena Jones (Eugenia.Jones@uspto.gov) or Joe Narcavage (Joseph.Narcavage@uspto.gov). For information on the waiver or legal aspects of the prototype, please contact Jay Lucas (Jay.Lucas@uspto.gov), Senior Legal Advisor (PCTLA) or Rob Clarke (Robert.Clarke@uspto.gov), Senior Legal Advisor (OPLA). Alternatively, further information may be obtained by calling OPLA at (703) 305-1616.

Allowable Subject Matter

11. Claims 15, 16, 17, 18, and 19 are allowed.
12. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

Double Patenting

13. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).
14. A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).
15. Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).
16. Claim 8 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims of U.S. Patent No. **6,564,065**. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims in the application are broader than in the patent.

Response to Arguments

17. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new grounds of rejection.

Terminal Disclaimer

18. The terminal disclaimer filed on August 15, 2003 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of **Chang, et al** (United States Patent 6,263,208 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Chen, et al disclose a pattern recognition based geolocation.

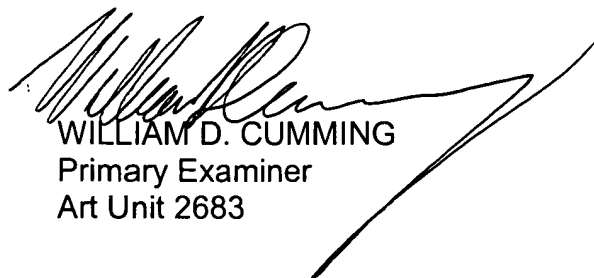
Chang, et al show geolocation estimation method for CDMA terminals.

20. If applicants wish to request for an interview, an "*Applicant Initiated Interview Request*" form (PTOL-413A) should be submitted to the examiner prior to the interview in order to permit the examiner to prepare in advance for the interview and to focus on the issues to be discussed. This form should identify the participants of the interview, the proposed date of the interview, whether the interview will be personal, telephonic, or video conference, and should include a brief description of the issues to be discussed. A copy of the completed "*Applicant Initiated Interview Request*" form should be attached to the Interview Summary form, PTOL-413 at the completion of the interview and a copy should be given to applicant or applicant's representative.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **WILLIAM D. CUMMING** whose telephone number is 703-305-4394. The examiner can normally be reached on Monday-Thursday, 11:30am to 8:00pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **WILLIAM TROST** can be reached on 703-308-5318. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

22. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.


WILLIAM D. CUMMING
Primary Examiner
Art Unit 2683



William Cumming
Primary Patent Examiner
Washington, DC 20231
(703) 305-4394 (703) 746-6075 Fax
william.cumming@uspto.gov